

Claims

What is claimed is:

1. A container for culturing and controllably
5 releasing microorganisms contained therein into fluid environments, comprising:

a sealed pouch comprising a porous material,
said porous material having pores sized and configured to allow said microorganisms to pass through said pores at a 10 rate of no more than about 0.5 g/day/cm² when said pouch is exposed to a stationary fluid environment.

2. A container as in Claim 1 wherein said pores are sized and configured to allow said microorganisms to pass through said pores at a rate of no more than about 15 0.25 g/day/cm² when said pouch is exposed to a stationary fluid environment.

3. A container as in Claim 1, wherein said pores are sized and configured to allow said microorganisms to pass through said pores at a rate of no more than about 20 0.15 g/day/cm² when said pouch is exposed to a stationary fluid environment.

4. A container as in Claim 1, wherein said porous material is biodegradable.

5. A container as in Claim 1, wherein said porous 25 material is a fibrous paper material.

6. A container as in Claim 1, wherein said sealed pouch contains at least microorganisms and nutrients whereby said microorganisms may culture within said pouch while developed microorganisms may be controllably 30 released into said fluid environments.

7. A system for controllably releasing substances into fluid environments, comprising:

a) a dispensing vessel; and

b) a porous container disposed within said dispensing vessel, said porous container comprising porous material having pores which are sized and configured to allow said substances to pass through said pores at a controlled rate.

8. A system as in Claim 7, wherein said porous container is biodegradable.

9. A system as in Claim 8, wherein said porous container comprises fibrous paper.

10. A system as in Claim 7, wherein at least a portion of said dispensing vessel includes open channels extending through an exterior wall of said vessel, such that fluid surrounding said dispensing vessel may be in contact with said porous container disposed therein.

15. A system as in Claim 7, wherein said dispensing vessel floats in an aqueous fluid environment.

12. A system as in Claim 7, wherein said dispensing vessel includes a floating portion and a growth chamber removably secured thereto and depending downwardly therefrom, said growth chamber having an exterior surface and an interior surface thereby defining a hollow chamber, and a plurality of open channels extending from said exterior surface to said interior surface of said growth chamber, said porous container being disposed in said hollow chamber and in fluid communication with fluid surrounding said growth chamber via said open channels.

20. A system as in Claim 12, wherein said porous container includes nutrients disposed therewithin.

13. A system as in Claim 12, wherein said floating portion includes a threaded flange extending downwardly therefrom, said flange being sized and configured to threadably receive said growth chamber.

15. A system as in Claim 12, wherein said floating portion and said growth chamber comprise polymeric materials.

16. A system as in Claim 7, wherein said dispensing vessel sinks in an aqueous fluid environment.

17. A method for culturing and controllably releasing microorganisms into fluid environments, comprising:

a) providing a porous container having microorganisms, nutrients, and a suspension fluid disposed therein, said porous container comprising material having pores which are sized and configured to allow said microorganisms to pass through said pores at a rate of no more than 0.01 g/day/cm² when said container is exposed to a stationary fluid environment; and

b) placing said container in an aqueous environment, thereby allowing said microorganisms to culture within said container and controllably release into said aqueous environment.

20 18. A method as in Claim 17, wherein said porous container is biodegradable.